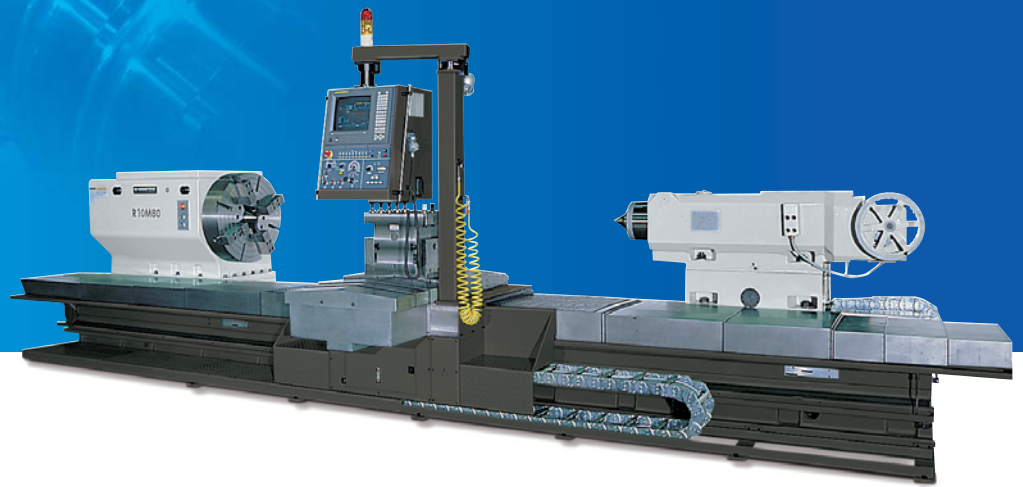


Heavy Duty CNC Roll Lathes  
**R Series**

R10/R16/R25/R40/R50/R70/R100/R150





# *R* Series Heavy Duty CNC Roll Lathes

**R10/R16/R25/R40/R50/R70/R100/R150**

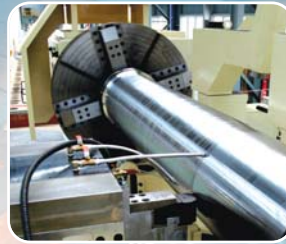
*R series has been produced with Hankook's high technology for large lathe cultivated experience for more than 40 years and designed for heavy duty cutting and accurate machining.*

## **Features**

- Large 10 to 150 tons load capacity between centers
- Automatic shifting 2-gear speed geared headstock
- Unrestrained turning through steady rests due to half carriage
- Extra wide (1200/1600/2000/3400mm) one-piece Meehanite cast iron bed
- Induction-hardened and precision-ground guide ways
- Built-in live tailstock spindle (  $\varnothing$  280 to 900mm quill dia.)
- Rapid feed device for tailstock body and tailstock spindle
- Full automatic lubrication to all critical areas



※ Optional accessories included





### Headstock



- Automatic shifting 2-gear speed geared headstock.
- Double wall construction for spindle support of Meehanite robust cast iron.
- Large diameter spindle in 2 points supporting system.
- Directly connected spindle power construction of powerful DC motor and coupling.
- Main spindle torque(kgf · m): 2020(R10), 3150(R16), 6100(R25), 8000(R40/R50), 12000(R70), 22500(R100/150)
- Constant surface speed control and spindle speed override(50~120%) are accommodated.

### Carriage



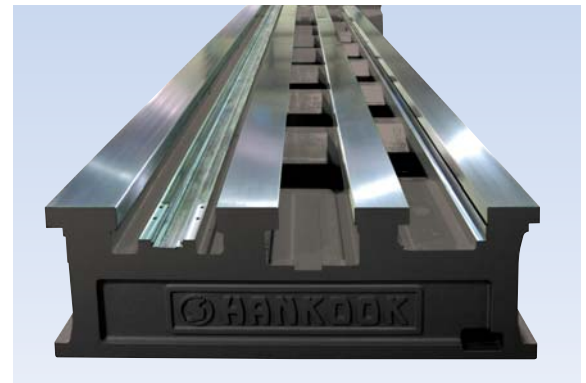
- No interference of steady rests during turning due to half carriage.
- Fluorine resins are plate on the slideways of carriage to decrease the friction of bearing surface.
- Telescopic cover protects the lower side of cross and longitudinal slideways which has induction hardened.
- Heavy duty two lamella type tool post and horizontal 4-station(H-4) tool post.
- As the pendant type control is located at the operator's position, centralized operation including from turning to self-diagnostic can be easily performed.

### Tailstock



- Tailstock spindle is 280 to 900mm dia. in built-in rotating system.
- Max. thrust load of tailstock spindle is 8000 to 75000kg
- Tailstock has rapid feed device.
- Tailstock spindle is rapid feed also thrust load meter as standard.
- Tailstock ratchet arm device is incorporated for heavy work piece support.

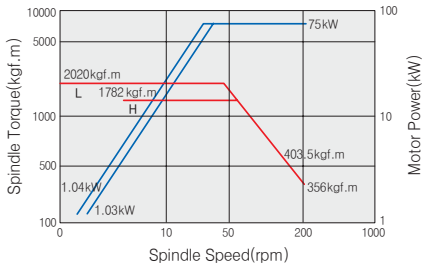
### Bed



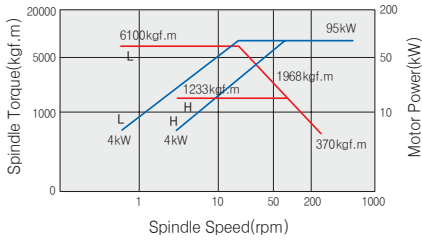
- The bed is a heavy one-piece casting with thick ribbing to prevent twisting and deformation.
- Fine grain Meehanite cast iron is used for its excellent dampening characteristics.
- The square flat bed design is suitable for heavy weight of work-piece directly downward onto the bed ways.
- Width of bed is 1200/1600/2000/1800+1600mm

## Torque & Power Diagram

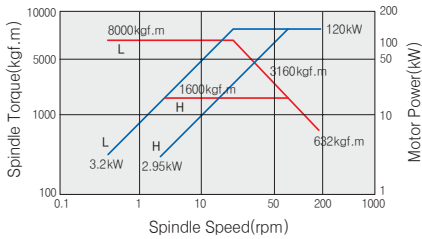
### R10M



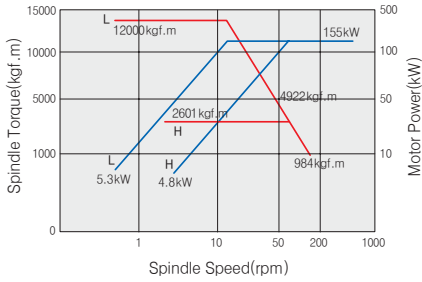
### R25W



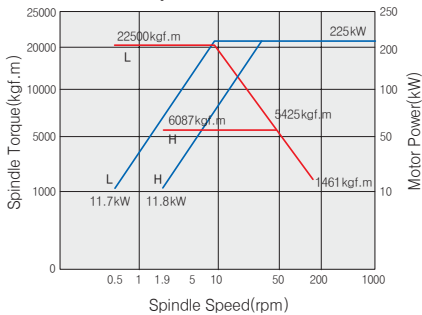
### R50W



### R70W

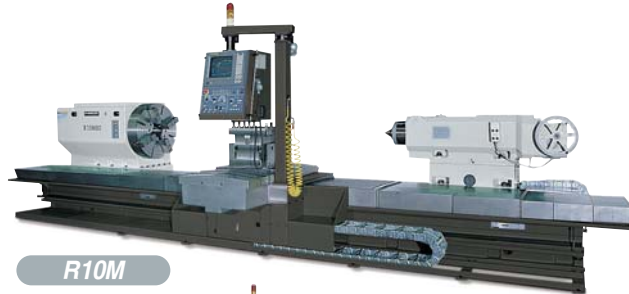


### R100TM/150TM



— Spindle Torque Line  
— Motor Power Line

## R Series Line-up



R10M



R16M



R25W



R50W



R70W

**Machine Specifications**

Items	Unit	R10M		R16M		R25W		R40H		R50W		R70W		
		80	100	100	120	160	200	160	200	160	200	220		
<b>Capacity</b>	Max. roll turning diameter	mm	800	1000	1000	1200	1600	2000	1600	2000	1600	2000	2200	
	Swing over carriage	mm	800	1000	1000	1200	1600	2000	1600	1600	1600	2000	2200	
	Max. turning length	mm	2000/3000/4000/5000/6000/7000/8000											
	Distance between centers	mm	2000/3000/4000/5000/6000/7000/8000											
	Load capacity between centers	kg	10,000		16,000		25,000		40,000		50,000		70,000	
<b>Spindle</b>	Spindle speed	rpm	0.5~250									0.4~185		
	Spindle speed range	step	Auto 2 steps											
	Spindle taper	-	1/12 short taper #100				1/12 short taper #120				1/12 short taper #140			
	Max. spindle torque	kgf.m	2020		3150		6100		8000		8000		12,000	
	Max. cutting force	kgf	3000		5000		12,000		16,000		16,000		20,000	
<b>Carriage</b>	X-axis travel	mm	300	350	450	550	600	800	600	800	600	800	950	
	Z-axis travel	mm	2000/3000/4000/5000/6000/7000/8000											
	X-axis rapid traverse	mm/min	4000											
	Z-axis rapid traverse	mm/min	6000											
<b>Tool post</b>	Type of tool post	-	H-4				Two lamella							
	No. of tool	ea	4				2							
	Tool post travel	mm	250				300							
	Tool holder width	mm	60		80		100		100		100		120	
<b>Tailstock</b>	Tailstock quill diameter	mm	280		320		400		500		500		630	
	Tailstock spindle taper	-	1/12 short taper #100				1/12 short taper #120				1/12 short taper #140			
	Max. spindle thrust	kgf	8000		12,500		16,000		25,000		25,000		50,000	
	Type of tailstock spindle	-	Built-in live spindle											
	Max. quill travel	mm	250		250		250		250		250		250	
<b>Bed</b>	Bed width	mm	1200		1200		2000		1600		2000		2000	
	Bed height	mm	580				700							
<b>Motor</b>	Spindle motor	kW(Hp)	60/75(80/100)		70(95)		95(125)		120(160)		120(160)		155(205)	
	X-axis servo motor	kW	AC 8.2		AC 10		AC 12		AC 14		AC 14		AC 14	
	Z-axis servo motor	kW	AC 8.2		AC 10		AC 12		AC 14		AC 14		AC 14	
<b>CNC System</b>		-	FANUC 32i-A											

**Standard Accessories**

- CNC controller, FAUNC 32i-A
- Spindle and servo drives and motors
- Dead centers (Headstock, Tailstock)
- Hydraulic power unit
- H-4 tool post (R10, R16)
- Lamella type tool post (R25, R40, R50, R70, R100, R150)
- Rotary type tailstock spindle
- Rapid feed device for tailstock body & tailstock spindle
- Tailstock load meter (6-ton)
- X/Z-axis protect steel cover
- Work light & patrol lamp
- Foundation bolts and nuts and leveling block
- Tool box with necessary tools

**Optional Accessories**

- 4-jaw independent chuck (2-step heavy duty geared chuck)  
Ø800mm (32"), Ø1000mm (40"), Ø1250mm(50"), Ø1500mm (60")
- Steady rests (roller jaws)
- Hydraulic steady rest
- Roll chock stand, 300~500mm, 500~700mm
- Chuck cover
- Chip conveyor (Z-axis)
- Tailstock load meter (6, 8, 10, 15, 20, 30 tons)
- Special tool holders
- Transformer
- Headstock center, 65°, 70°

R100TM			R150TM		
200	250	300	200	250	300
2000	2500	3000	2000	2500	3000
2000	2500	3000	2000	2500	3000
8000/10,000/12,000~200,000			8000/10,000/12,000~200,000		
100,000			150,000		
0.5~150					
Auto 2 steps					
1/12 short taper #160					
22,500					
20,000					
950					
8000/10,000/12,000~200,000					
5000					
5000					
Two lamella					
2					
600					
120					
800			900		
1/12 short taper #160					
50,000			75,000		
Built-in live spindle					
150			150		
1800+1600					
700					
225(300)					
AC 16					
AC 16					

## Standard CNC Control Features

### FANUC 32i-A Control Features:

- Simultaneously controllable axes : 2
- Minimum programmable increment : 0.001mm(0.0001")
- Tape storage length : 320m(1048 feet)
- Registerable programs : 63
- Backlash compensation
- Constant surface speed control
- Self diagnostic functions

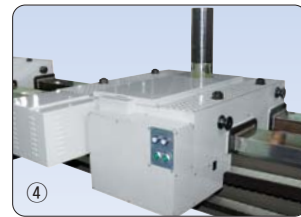
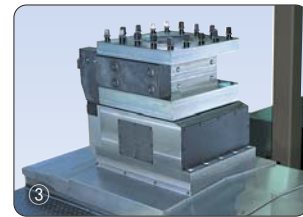
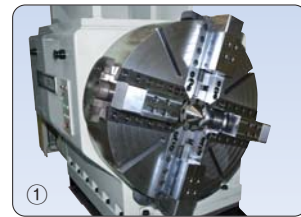
### Programming Features:

- Circular interpolation by radius designation
- Tool nose radius compensation (G40-G42)
- Combined use of absolute/incremental command
- Inch/Metric programming
- Chamfering, coner R
- Multiple repetitive cycles (G70-G76)
- Decimal point programming
- Reference point return (G27-G30)
- Sub-program-4 holds nested
- Extended part program editing

### Operation Features:

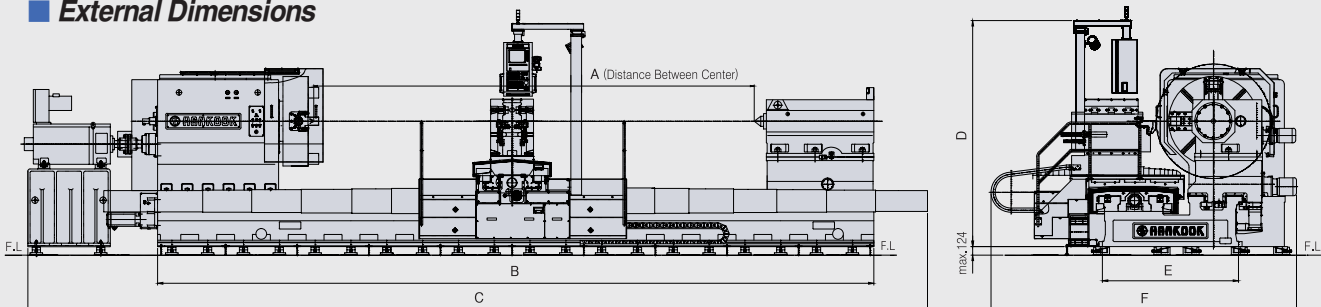
- High resolution 10.4" color LCD
- Absolute position encoders (no zero return required)
- Geometry and wear offsets
- 32 pairs of tool offsets
- Run hour display
- Thread cutting retract
- Direct input of offset valve measured
- Input/output interface (RS232C)
- Keyboard type manual data input (MDI Full key)
- Program protect key
- Incremental offset
- Rapid traverse override
- Feed rate override
- Spindle speed override
- Tape code : EIA, ISO Automatic recognition

## Accessories & Special Applications



- ① 2-step heavy duty geared chuck
- ② Two lamella tool post
- ③ H-4 tool post
- ④ Roll stand
- ⑤ Rack & 2-pinion

## External Dimensions



A (Center Distance)	2000	3000	4000	5000	6000	7000	8000	9000	10000	~	20000
R-10/16	5060	6060	7060	8060	9060	10060	11060	12000	~	~	~
B	6000	7000	8000	9000	10000	11000	12000	~	~	~	~
R-25/40/50/70	~	~	~	~	~	~	~	~	~	~	~
R-100/150	~	~	~	~	~	~	~	~	~	~	~
C	7095	8095	9095	10095	11095	12095	13095	~	~	~	~
R-10/16	8400	9400	10400	11400	12400	13400	14400	~	~	~	~
R-25/40/50/70	~	~	~	~	~	~	~	~	~	~	~
R-100/150	~	~	~	~	~	~	~	~	~	~	~

	R10	R16	R25	R40	R50	R70	R100	R150
D	2400	2400	3200	3200	3200	3200	4000	
E	1160	1160	1900	1900	1900	1900	1620+1490	
F	2750	2750	4265	4265	4265	4265	6180	

unit:mm



DNV Certification, Ltd.  
ISO 9001 REGISTERED FIRM



HEAD OFFICE & PLANT

**HANKOOK MACHINE TOOLS CO., LTD.**

52, Ungnam-dong, Seongsan-gu, Changwon-si,  
Gyeongnam, Korea.

TEL: +82-55-282-7781/7660 FAX: +82-55-284-9791

E-mail: sales@hanmachine.com

[www.hanmachine.com](http://www.hanmachine.com)

AMERICA OFFICE

**Hankook America, Corp.**

1601 Atlantic Drive-#109 West Chicago, IL 60185 U.S.A

TEL: +1-630-562-9240 FAX: +1-630-562-9250

E-mail: hankookamerica@msn.com

EUROPE OFFICE

**Vertriebsgesellschaft**

**HANKOOK MACHINE GERMANY GmbH**

Schwalbacher Str. 62, 65760 Eschborn Germany.

TEL: +49-6196-99849-0 FAX: +49-6196-99849-29

E-mail: info@hanmachine.de

[www.hanmachine.de](http://www.hanmachine.de)

北京代表处 / BEIJING OFFICE

**韩国工作机械株式会社**

北京市朝阳区广顺南大街东亚望京中心B座1010室

Room 1010, Block B, Guangshun South Street,

East-Aisa Wangjing Center Building,

Chaoyang District, Beijing, 100102 China.

TEL: +86-10-8478-6108 FAX: +86-10-8478-6128

E-mail: wmh722@163.com

上海事务所 / SHANGHAI OFFICE

**韩国工作机械株式会社**

上海市延安西路2299号世贸商城11P07

Room 11p07, Shanghai Mart, No.2299 West Yanan Rd.

Shanghai, China.

TEL: +86-21-6236-1153(Ext 806) FAX: +86-21-6236-0323

E-mail: lgkim@126.com

JAPAN OFFICE

Maruei Nishihonmachi Bldg 3F,

1-15-16, Awaza, Nishi-ku, Osaka-shi 550-0011

TEL: +81-6-6543-3455 FAX: +81-6-6543-7859

E-mail: hjkang@hanmachine.com

SINGAPORE OFFICE

**Hankook Singapore Pte. Ltd.**

Blk 1013 Geylang East Ave 3 #04-106 Singapore 389728.

TEL: +65-6747-8665 FAX: +65-6748-6546

E-mail: hanmachine@singnet.com.sg

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